TEXAS DEPARTMENT OF HEALTH
AUSTIN TEXAS
INTER-OFFICE

TO: Regional Directors
Directors, Local Health Departments
Directors, Independent WIC Local Agencies
Director, Office of Public Health Practice

FROM: Barbara Keir, Director
Public Health Nutrition and Education
Bureau of Nutrition Services

DATE: September 20, 2002

SUBJECT: Revised Risk Codes: 101, 102, 111, 112, 131 and 133

The State Agency recently received revised/updated risk criteria from USDA related to weight status. Attached is a set of revised risk code pages to place in your copy of the Texas Nutrition Risk Manual. Please note the revision date of 10/02. Additional copies will be mailed to each local agency to distribute to ensure each CPA has a revised set.

The following risk criteria have been changed:

101 Underweight (Women) – Pregnant, Breastfeeding and Postpartum Women
102 Underweight (Breastfeeding Women 6 months or more postpartum)

111 Overweight (Women) - Pregnant, Breastfeeding and Postpartum Women
112 Overweight (Breastfeeding Women 6 months or more postpartum)

131 Low Maternal Weight Gain – Pregnant
133 High Maternal Weight Gain – Pregnant, Breastfeeding, Postpartum

The risk criteria have been revised to reflect the emphasis on Body Mass Index (BMI) when assessing weight status. BMI tables for determining weight classification for pregnant and non-pregnant women accompany risk codes 101, 102, 111, and 112. A Clarification section has been included with risk codes 131 and 133 to help guide CPAs in the correct assignment of these risk criteria.

Each CPA should remove the earlier version of these risk codes from his or her copy of the Texas Nutrition Risk Manual and replace with the attached 10/02 revised versions.

If you have any questions or need further information, you may reach Isabel Clark, Clinical Nutrition Specialist, at 512-458-7111, ext. 3489 or Isabel.Clark@tdh.state.tx.us.

Attachments

Underweight (Women)

Definition/ cut-off value

Pregnant Women
- prepregnancy Body Mass Index (BMI) <19.8

Non-Breastfeeding Women
- prepregnancy or current Body Mass Index (BMI) <18.5

Breastfeeding Women Who Are <6 Months Postpartum
- prepregnancy or current Body Mass Index (BMI) <18.5

Note: Until research supports the use of different BMI cut-offs to determine weight status categories for adolescent pregnancies, the same BMI cut-offs will be used for all women, regardless of age, when determining WIC eligibility. (See Justification for a more detailed explanation.)

Participant category and priority level

Category	Priority
Pregnant Women	I
Breastfeeding Women	I
Non-Breastfeeding Women	III

Justification

Underweight women who become pregnant are at a higher risk for delivery of low birth weight (LBW) infants, retarded fetal growth, and perinatal mortality. Prepregnancy underweight is also associated with a higher incidence of various pregnancy complications, such as antepartum hemorrhage, premature rupture of membranes, anemia, endometriosis, and cesarean delivery.

The goal in prenatal nutritional counseling provided by WIC is to achieve recommended weight gain by emphasizing food choices of high nutritional quality; and for the underweight woman, by encouraging increased consumption and/or the inclusion of some calorically dense foods.

Although the 1998 National, Heart, Lung and Blood Institute (NHLBI) Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, define underweight as having a

Justification (cont)

BMI less than 18.5; the 1990 Institute of Medicine (IOM) report, Nutrition During Pregnancy, establishes prepregnancy weight classifications that define underweight as having a BMI <19.8. The IOM classifications were subsequently validated for pregnancy by Parker and Abrams and by Siega-Riz et al and others. Recommendations for weight gain during pregnancy therefore are based on the IOM 1990 definitions of prepregnancy weight status.

The IOM established prenatal weight gain recommendations based on prepregnancy BMI weight categories (i.e., low, normal, high, obese). As validated by Parker and Abrams, the IOM weight gain recommendations for each weight category are associated with healthy birth outcomes. The decision to use the IOM recommended BMI weight categories for pregnant adolescents as well as for adults is based on three factors.

- There are no established BMI cut-offs to define prepregnancy weight categories (with corresponding recommendations for prenatal weight gain) specific to adolescents.
- There is no research to support using the CDC issued BMI-for-age chart to define prepregnancy BMI weight categories for pregnant adolescents.
- It is consistent with the recommendations of the Expert Work Group on Maternal Weight.

It is recognized that both the IOM and the NHLBI BMI cut-offs for defining weight categories will classify some adolescents differently than the CDC BMI-for-age charts. For the purpose of WIC eligibility determination, the IOM and the NHLBI BMI cut-off will be used for all women regardless of age. However, due to the lack of research on relevant BMI cut-offs for pregnant and postpartum adolescents, professionals should use all of the tools available to them to assess these applicants' anthropometric status and tailor nutrition counseling accordingly.

Weight during the early postpartum period, when most WIC certifications occur, is very unstable. During the first 4-6 weeks fluid shifts and tissue changes cause fluctuations in weight. After 6 weeks, weight loss varies among women. Prepregnancy weight, amount of weight gain during pregnancy, race, age, parity and lactation all influence the rate of postpartum weight loss. By 6 months postpartum, body weight is more stable and should be close to the prepregnancy weight. In most cases therefore, prepregnancy weight is a better

Justification (cont)

indicator of weight status than postpartum weight in the first 6 months after delivery. The one exception is the woman with a BMI of <18.5 during the immediate 6 months after delivery. Underweight at this stage may indicate inadequate weight gain during pregnancy, depression, an eating disorder or disease; any of which need to be addressed.

While being on the lean side of normal weight is generally considered healthy, being underweight can be indicative of poor nutritional status, inadequate food consumption, and/or an underlying medical condition. Underweight women who are breastfeeding may be further impacting their own nutritional status. Should she become pregnant again, an underweight woman is at a higher risk for delivery of low birth weight (LBW) infants, retarded fetal growth, and perinatal mortality. The role of the WIC Program is to assist underweight women in the achievement of a healthy dietary intake and body mass index.

Clarifications/ Guidelines

Refer to WIC-04 for BMI nomogram.

References

1. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), NIH Publication No. 98-4083. www.nih.gov.

2. Institute of Medicine: Nutrition During Pregnancy; National Academy Press; 1990; pg.12.

3. Institute of Medicine. WIC Nutrition Risk Criteria: A Scientific Assessment. National Academy Press, Washington, D.C.; 1996.

4. Parker JD, Abrams B. Prenatal weight gain advice: an examination of the recent prenatal weight gain recommendations of the Institute of Medicine. Obstet Gynecol, 1992; 79:664-9.

5. Siega-Riz AM, Adair LS, Hobel CJ. Institute of Medicine maternal weight gain recommendations and pregnancy outcomes in a predominately Hispanic population. Obstet Gynecol, 1994; 84:565-73.

References (cont)

6. Suitor CW, editor. Maternal weight gain: A report of an expert work group. Arlington, Virginia: National Center for Education in Maternal and Child Health; 1997. Sponsored by Maternal and Child Health Bureau, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services.

7. Weight Changes in the Postpartum Period: A Review of the Literature. D.T. Crowell. Journal of Nurse-Midwifery. Vol. 40, No. 5, September/October 1995; pgs 418-423.

8. Worthington-Roberts, B.S. and S.R. Williams. Nutrition in Pregnancy and Lactation, 6th Edition. McGraw-Hill; 1997.

Body Mass Index (BMI) Table for Determining Weight Classification for Pregnant Women(1)

Height (Inches)	Underweight BMI <19.8	Normal Weight BMI 19.8-26.0	Overweight BMI 26.1-29.0	Obese BMI ≥29.1
58”	<95	95-124	125-138	>138
59”	<98	98-128	129-143	>143
60”	<102	102-133	134-148	>148
61”	<105	105-137	138-153	>153
62”	<108	108-142	143-158	>158
63”	<112	112-146	147-163	>163
64”	<116	116-151	152-169	>169
65”	<119	119-156	157-174	>174
66”	<123	123-161	162-179	>179
67”	<127	127-166	167-185	>185
68”	<130	130-171	172-190	>190
69”	<134	134-176	177-196	>196
70”	<138	138-181	182-202	>202
71”	<142	142-186	187-208	>208
72”	<146	146-191	192-213	>213

(1) Adapted from the Institute of Medicine: Nutrition During Pregnancy, National Academy Press; 1990; page 12.

BMI Table for Determining Weight Classification for Non-Pregnant Women(1)

Height (Inches)	Underweight BMI <18.5	Normal Weight BMI 18.5-24.9	Overweight BMI 25.0-29.9	Obese BMI ≥ 30.0
58”	<89	89-118	119-142	>142
59”	<92	92-123	124-147	>147
60”	<95	95-127	128-152	>152
61”	<98	98-131	132-157	>157
62”	<101	101-135	136-163	>163
63”	<105	105-140	141-168	>168
64”	<108	108-144	145-173	>173
65”	<111	111-149	150-179	>179
66”	<115	115-154	155-185	>185
67”	<118	118-158	159-190	>190
68”	<122	122-163	164-196	>196
69”	<125	125-168	169-202	>202
70”	<129	129-173	174-208	>208
71”	<133	133-178	179-214	>214
72”	<137	137-183	184-220	>220

(1) Adapted from the Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. National Heart, Lung and Blood Institute (NHLBI), National Institutes of Health (NIH). NIH Publication No. 98-4083.

Underweight (Breastfeeding Women 6 months or more postpartum)

Definition/ cut-off value

Breastfeeding Women Who Are > or equal to 6 Months Postpartum

- current Body Mass Index (BMI) <18.5

Note: Until research supports the use of different BMI cut-offs to determine weight status categories for adolescent pregnancies, the same BMI cut-offs will be used for all women, regardless of age, when determining WIC eligibility. (See Justification for a more detailed explanation.)

Participant category and priority level

Category	Priority
Breastfeeding Women	I

Justification

Underweight women who become pregnant are at a higher risk for delivery of low birth weight (LBW) infants, retarded fetal growth, and perinatal mortality. Prepregnancy underweight is also associated with a higher incidence of various pregnancy complications, such as antepartum hemorrhage, premature rupture of membranes, anemia, endometriosis, and cesarean delivery.

The goal in prenatal nutritional counseling provided by WIC is to achieve recommended weight gain by emphasizing food choices of high nutritional quality; and for the underweight woman, by encouraging increased consumption and/or the inclusion of some calorically dense foods.

Although the 1998 National, Heart, Lung and Blood Institute (NHLBI) Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, define underweight as having a BMI less than 18.5; the 1990 Institute of Medicine (IOM) report, Nutrition During Pregnancy, establishes prepregnancy weight classifications that define underweight as having a BMI <19.8. The IOM classifications were subsequently validated for pregnancy by Parker and Abrams and by Siega-Riz et al and others. Recommendations for weight gain during pregnancy therefore are based on the IOM 1990 definitions of prepregnancy weight status.

Justification (cont)

The IOM established prenatal weight gain recommendations based on prepregnancy BMI weight categories (i.e., low, normal, high, obese). As validated by Parker and Abrams, the IOM weight gain recommendations for each weight category are associated with healthy birth outcomes. The decision to use the IOM recommended BMI weight categories for pregnant adolescents as well as for adults is based on three factors.

- There are no established BMI cut-offs to define prepregnancy weight categories (with corresponding recommendations for prenatal weight gain) specific to adolescents.
- There is no research to support using the CDC issued BMI-for-age chart to define prepregnancy BMI weight categories for pregnant adolescents.
- It is consistent with the recommendations of the Expert Work Group on Maternal Weight.

It is recognized that both the IOM and the NHLBI BMI cut-offs for defining weight categories will classify some adolescents differently than the CDC BMI-for-age charts. For the purpose of WIC eligibility determination, the IOM and the NHLBI BMI cut-off will be used for all women regardless of age. However, due to the lack of research on relevant BMI cut-offs for pregnant and postpartum adolescents, professionals should use all of the tools available to them to assess these applicants' anthropometric status and tailor nutrition counseling accordingly.

Weight during the early postpartum period, when most WIC certifications occur, is very unstable. During the first 4-6 weeks fluid shifts and tissue changes cause fluctuations in weight. After 6 weeks, weight loss varies among women. Prepregnancy weight, amount of weight gain during pregnancy, race, age, parity and lactation all influence the rate of postpartum weight loss. By 6 months postpartum, body weight is more stable and should be close to the prepregnancy weight. In most cases therefore, prepregnancy weight is a better indicator of weight status than postpartum weight in the first 6 months after delivery. The one exception is the woman with a BMI of <18.5 during the immediate 6 months after delivery. Underweight at this stage may indicate inadequate weight gain during pregnancy, depression, an eating disorder or disease; any of which need to be addressed.

While being on the lean side of normal weight is generally considered

102 (continued)

Justification (cont)

healthy, being underweight can be indicative of poor nutritional status, inadequate food consumption, and/or an underlying medical condition. Underweight women who are breastfeeding may be further impacting their own nutritional status. Should she become pregnant again, an underweight woman is at a higher risk for delivery of low birth weight (LBW) infants, retarded fetal growth, and perinatal mortality. The role of the WIC Program is to assist underweight women in the achievement of a healthy dietary intake and body mass index.

Clarifications/ Guidelines

Refer to WIC-04 for BMI nomogram.

References

1. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), NIH Publication No. 98-4083. www.nih.gov.
2. Institute of Medicine: Nutrition During Pregnancy; National Academy Press; 1990; pg.12.
3. Institute of Medicine. WIC Nutrition Risk Criteria: A Scientific Assessment. National Academy Press, Washington, D.C.; 1996.
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References (cont)

7. Weight Changes in the Postpartum Period: A Review of the Literature. D.T. Crowell. Journal of Nurse-Midwifery. Vol. 40, No. 5, September/October 1995; pgs 418-423.

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58”	<95	95-124	125-138	>138
59”	<98	98-128	129-143	>143
60”	<102	102-133	134-148	>148
61”	<105	105-137	138-153	>153
62”	<108	108-142	143-158	>158
63”	<112	112-146	147-163	>163
64”	<116	116-151	152-169	>169
65”	<119	119-156	157-174	>174
66”	<123	123-161	162-179	>179
67”	<127	127-166	167-185	>185
68”	<130	130-171	172-190	>190
69”	<134	134-176	177-196	>196
70”	<138	138-181	182-202	>202
71”	<142	142-186	187-208	>208
72”	<146	146-191	192-213	>213

(1) Adapted from the Institute of Medicine: Nutrition During Pregnancy, National Academy Press; 1990; page 12.

BMI Table for Determining Weight Classification for Non-Pregnant Women(1)

Height (Inches)	Underweight BMI <18.5	Normal Weight BMI 18.5-24.9	Overweight BMI 25.0-29.9	Obese BMI ≥ 30.0
58”	<89	89-118	119-142	>142
59”	<92	92-123	124-147	>147
60”	<95	95-127	128-152	>152
61”	<98	98-131	132-157	>157
62”	<101	101-135	136-163	>163
63”	<105	105-140	141-168	>168
64”	<108	108-144	145-173	>173
65”	<111	111-149	150-179	>179
66”	<115	115-154	155-185	>185
67”	<118	118-158	159-190	>190
68”	<122	122-163	164-196	>196
69”	<125	125-168	169-202	>202
70”	<129	129-173	174-208	>208
71”	<133	133-178	179-214	>214
72”	<137	137-183	184-220	>220

(1) Adapted from the Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. National Heart, Lung and Blood Institute (NHLBI), National Institutes of Health (NIH). NIH Publication No. 98-4083.

Overweight (Women)

Definition/ cut-off value

Pregnant Women
- prepregnancy Body Mass Index (BMI) ≥ 26.1

Non-Breastfeeding Women
- prepregnancy Body Mass Index (BMI) ≥25

Breastfeeding Women Who Are <6 Months Postpartum
- prepregnancy Body Mass Index (BMI) ≥25

Note: Until research supports the use of different BMI cut-offs for adolescent pregnancies, the same BMI cut-offs will be used for all women, regardless of age, when determining WIC eligibility. (See Justification for a more detailed explanation.)

Participant category and priority level

Category	Priority
Pregnant Women	I
Breastfeeding Women	I
Non-Breastfeeding Women	VI

Justification

Women who are overweight at conception have increased obstetric risks for diabetes mellitus, hypertension, thromboembolic complications, preterm births, macrosomia, dysfunctional labor, and complications in operative deliveries.

One goal of prenatal nutritional counseling is to achieve recommended weight gain. For the overweight woman, emphasis should be on selecting food choices of high nutritional quality and avoiding calorie rich foods, thereby minimizing further risks associated with increased overweight and obesity.

Although the 1998 National, Heart, Lung and Blood Institute (NHLBI) Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, define overweight as BMI ≥25; the 1990 Institute Of Medicine (IOM) report, Nutrition During Pregnancy, establishes prepregnancy weight classifications that define overweight as BMI ≥26.1. The IOM classifications were subsequently validated for pregnancy by Parker and Abrams and by Siega-Riz et al and others. Recommendations for weight gain during pregnancy therefore are based on the 1990 definitions of prepregnancy weight status. If future research shows that prenatal weight gain using the NHLBI definitions of adult weight status is safe for pregnancy and results in similar pregnancy outcomes, the definitions will be revised.

Justification (cont)

The IOM established prenatal weight gain recommendations based on prepregnancy BMI weight categories (i.e., low, normal, high, obese). As validated by Parker and Abrams, the IOM weight gain recommendations for each weight category are associated with healthy birth outcomes. The decision to use the IOM recommended BMI weight categories for pregnant adolescents as well as for adults is based on three factors.

- There are no established BMI cut-offs to define prepregnancy weight categories (with corresponding recommendations for prenatal weight gain) specific to adolescents.
- There is no research to support using the CDC issued BMI-for-age chart to define prepregnancy BMI weight categories for pregnant adolescents.
- It is consistent with recommendations of the Expert Work Group on Maternal Weight.

It is recognized that both the IOM and the NHLBI BMI cut-offs for defining weight categories will classify some adolescents differently than the CDC BMI-for-age charts. For the purpose of WIC eligibility determination, the IOM and the NHLBI BMI cut-offs will be used for all women regardless of age. However, due to the lack of research on relevant BMI cut-offs for pregnant and postpartum adolescents, professionals should use all of the tools available to them to assess these applicants' anthropometric status and tailor nutrition counseling accordingly.

Weight during the early postpartum period, when most WIC certifications occur, is very unstable. During the first 4-6 weeks fluid shifts and tissue changes cause fluctuations in weight. After 6 weeks, weight loss varies among women. Prepregnancy weight, amount of weight gain during pregnancy, race, age, parity and lactation all influence the rate of postpartum weight loss. By 6 months postpartum, body weight is more stable and should be close to the prepregnancy weight. In most cases therefore, prepregnancy weight is a better indicator of weight status than postpartum weight in the first 6 months after delivery.

The percentage of adolescents who are overweight is increasing rapidly and more than 60% of adults in the US are overweight. Due to the significant impact that overweight and obesity have on morbidity and mortality, it is imperative that every effort be made to identify individuals who are overweight and to assist them in achieving a more healthful weight. The WIC Program is in a position to play an important role in helping to reduce the prevalence of overweight not only by working with postpartum women on improving their own weight status, but also by helping them to see their role in assisting their children to learn healthful eating and physical activity behaviors.

Clarifications/ Guidelines

Refer to WIC-04 for BMI nomogram.

References

1. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National Heart, Lung, and BloodInstitute (NHLBI), National Institutes of Health (NIH), NIH Publication No. 98-4083. www.nih.gov.

2. Institute of Medicine: Nutrition During Pregnancy; National Academy Press; 1990.

3. Institute of Medicine: WIC Nutrition Risk Criteria: A Scientific Assessment. National Academy Press, Washington, D.C.; 1996.

4. Naye, R.L.: Maternal body weight and pregnancy outcome. American Journal Clin. Nutr.; 1990; 52:273-279.

5. Parker JD, Abrams B. Prenatal weight gain advice: an examination of the recent prenatal weight gain recommendations of the Institute of Medicine. Obstet Gynecol, 1992; 79:664-9.

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62”	<108	108-142	143-158	>158
63”	<112	112-146	147-163	>163
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70”	<138	138-181	182-202	>202
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(1) Adapted from the Institute of Medicine: Nutrition During Pregnancy, National Academy Press; 1990; page 12.

BMI Table for Determining Weight Classification for Non-Pregnant Women(1)

Height (Inches)	Underweight BMI <18.5	Normal Weight BMI 18.5-24.9	Overweight BMI 25.0-29.9	Obese BMI ≥ 30.0
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(1) Adapted from the Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. National Heart, Lung and Blood Institute (NHLBI), National Institutes of Health (NIH). NIH Publication No. 98-4083.

Overweight (Breastfeeding Women 6 months or more postpartum)

Definition/ cut-off value

Breastfeeding Women Who Are > or equal to 6 months postpartum

- current Body Mass Index (BMI) $ 25

Note: Until research supports the use of different BMI cut-offs for adolescent pregnancies, the same BMI cut-offs will be used for all women, regardless of age, when determining WIC eligibility. (See Justification for a more detailed explanation.)

Participant category and priority level

Category	Priority
Breastfeeding Women	I

Justification

Women who are overweight at conception have increased obstetric risks for diabetes mellitus, hypertension, thromboembolic complications, preterm births, macrosomia, dysfunctional labor, and complications in operative deliveries.

One goal of prenatal nutritional counseling is to achieve recommended weight gain. For the overweight woman, emphasis should be on selecting food choices of high nutritional quality and avoiding calorie rich foods, thereby minimizing further risks associated with increased overweight and obesity.

Although the 1998 National, Heart, Lung and Blood Institute (NHLBI) Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, define overweight as BMI ≥25; the 1990 Institute Of Medicine (IOM) report, Nutrition During Pregnancy, establishes prepregnancy weight classifications that define overweight as BMI ≥26.1. The IOM classifications were subsequently validated for pregnancy by Parker and Abrams and by Siega-Riz et al and others. Recommendations for weight gain during pregnancy therefore are based on the 1990 definitions of prepregnancy weight status. If future research shows that prenatal weight gain using the NHLBI definitions of adult weight status is safe for pregnancy and results in similar pregnancy outcomes, the definitions will be revised.

The IOM established prenatal weight gain recommendations based on prepregnancy BMI weight categories (i.e., low, normal, high, obese). As validated by Parker and Abrams, the IOM weight gain recommendations for each weight category are associated with healthy birth outcomes. The decision to use the IOM recommended BMI weight categories for pregnant adolescents as well as for adults is based on three factors.

Justification (cont)

- There are no established BMI cut-offs to define prepregnancy weight categories (with corresponding recommendations for prenatal weight gain) specific to adolescents.
- There is no research to support using the CDC issued BMI-for-age chart to define prepregnancy BMI weight categories for pregnant adolescents.
- It is consistent with recommendations of the Expert Work Group on Maternal Weight.

It is recognized that both the IOM and the NHLBI BMI cut-offs for defining weight categories will classify some adolescents differently than the CDC BMI-for-age charts. For the purpose of WIC eligibility determination, the IOM and the NHLBI BMI cut-offs will be used for all women regardless of age. However, due to the lack of research on relevant BMI cut-offs for pregnant and postpartum adolescents, professionals should use all of the tools available to them to assess these applicants' anthropometric status and tailor nutrition counseling accordingly.

Weight during the early postpartum period, when most WIC certifications occur, is very unstable. During the first 4-6 weeks fluid shifts and tissue changes cause fluctuations in weight. After 6 weeks, weight loss varies among women. Prepregnancy weight, amount of weight gain during pregnancy, race, age, parity and lactation all influence the rate of postpartum weight loss. By 6 months postpartum, body weight is more stable and should be close to the prepregnancy weight. In most cases therefore, prepregnancy weight is a better indicator of weight status than postpartum weight in the first 6 months after delivery.

The percentage of adolescents who are overweight is increasing rapidly and more than 60% of adults in the US are overweight. Due to the significant impact that overweight and obesity have on morbidity and mortality, it is imperative that every effort be made to identify individuals who are overweight and to assist them in achieving a more healthful weight. The WIC Program is in a position to play an important role in helping to reduce the prevalence of overweight not only by working with postpartum women on improving their own weight status, but also by helping them to see their role in assisting their children to learn healthful eating and physical activity behaviors.

Clarifications/ Guidelines

Refer to WIC-04 for BMI nomogram.

References

1. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), NIH Publication No. 98-4083. www.nih.gov.

References (cont)

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6. Siega-Riz AM, Adair LS, Hobel CJ. Institute of Medicine maternal weight gain recommendations and pregnancy outcomes in a predominately Hispanic population. Obstet Gynecol, 1994; 84:565-73.

7. Suitor CW, editor. Maternal weight gain: A report of an expert work group. Arlington, Virginia: National Center for Education in Maternal and Child Health; 1997. Sponsored by Maternal and Child Health Bureau, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services.

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Body Mass Index (BMI) Table for Determining Weight Classification for Pregnant Women(1)

Height (Inches)	Underweight BMI <19.8	Normal Weight BMI 19.8-26.0	Overweight BMI 26.1-29.0	Obese BMI ≥29.1
58”	<95	95-124	125-138	>138
59”	<98	98-128	129-143	>143
60”	<102	102-133	134-148	>148
61”	<105	105-137	138-153	>153
62”	<108	108-142	143-158	>158
63”	<112	112-146	147-163	>163
64”	<116	116-151	152-169	>169
65”	<119	119-156	157-174	>174
66”	<123	123-161	162-179	>179
67”	<127	127-166	167-185	>185
68”	<130	130-171	172-190	>190
69”	<134	134-176	177-196	>196
70”	<138	138-181	182-202	>202
71”	<142	142-186	187-208	>208
72”	<146	146-191	192-213	>213

(1) Adapted from the Institute of Medicine: Nutrition During Pregnancy, National Academy Press; 1990; page 12.

BMI Table for Determining Weight Classification for Non-Pregnant Women(1)

Height (Inches)	Underweight BMI <18.5	Normal Weight BMI 18.5-24.9	Overweight BMI 25.0-29.9	Obese BMI ≥ 30.0
58”	<89	89-118	119-142	>142
59”	<92	92-123	124-147	>147
60”	<95	95-127	128-152	>152
61”	<98	98-131	132-157	>157
62”	<101	101-135	136-163	>163
63”	<105	105-140	141-168	>168
64”	<108	108-144	145-173	>173
65”	<111	111-149	150-179	>179
66”	<115	115-154	155-185	>185
67”	<118	118-158	159-190	>190
68”	<122	122-163	164-196	>196
69”	<125	125-168	169-202	>202
70”	<129	129-173	174-208	>208
71”	<133	133-178	179-214	>214
72”	<137	137-183	184-220	>220

(1) Adapted from the Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. National Heart, Lung and Blood Institute (NHLBI), National Institutes of Health (NIH). NIH Publication No. 98-4083.

Low Maternal Weight Gain

Definition/ cut-off value

Low maternal weight gain is defined as:

1. A low rate of weight gain, such that:

   In the 2nd and 3rd trimesters, singleton pregnancies:

- Underweight women gain less than (<) 4 pounds per month
- Normal/Overweight women gain less than (<) 2 pounds per month
- Obese women gain less than (<) 1 pound per month

OR

2. **Low weight gain at any point in pregnancy**, such that:

Using an Institute of Medicine (IOM)-based weight gain grid, a pregnant woman's weight plots at any point beneath the bottom line of the appropriate weight gain range for her respective prepregnancy weight category (underweight, normal, overweight, or obese). An IOM-based weight grid is one based on IOM's 1990 recommendations for maternal weight gain (e.g., recommended range of 28-40 pounds for underweight women, 25-35 pounds for normal weight women, 15-25 pounds for overweight women, and at least 15 pounds for obese women).

Underweight	BMI < 19.8
Normal Weight	BMI 19.8 to 26.0
Overweight	BMI 26.1 to 29.0
Obese	BMI ≥ 29.1

Note: Until research supports the use of different BMI cut-offs to determine weight categories for adolescent pregnancies, the same BMI cut-offs will be used for all women, regardless of age, when determining WIC eligibility. (See Justification for a more detailed explanation.)

Participant category and priority level

Category	Priority
Pregnant	I

Justification

Low maternal weight gain during the 2nd and 3rd trimesters is a determinant of fetal growth, and is associated with smaller average birth weights and an increased risk of delivering an infant with fetal growth restriction. The supplemental foods and nutrition education provided by the WIC Program may

Justification (cont) improve maternal weight status and infant outcomes

The 1998 National, Heart, Lung and Blood Institute (NHLBI) Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, defines weight classifications differently than Institute Of Medicine (IOM) in their 1990 report, Nutrition During Pregnancy. The IOM classifications were subsequently validated for pregnancy by Parker and Abrams and by Siega-Riz et al and others. If future research shows that prenatal weight gain using the NHLBI definitions of adult weight status is safe for pregnancy and results in similar pregnancy outcomes, the definitions will be revised.

The IOM established prenatal weight gain recommendations based on prepregnancy BMI categories (i.e., low, normal, high, obese). As validated by Parker and Abrams, the IOM weight gain recommendations for each weight category are associated with healthy birth outcomes. The decision to use the IOM recommended BMI weight categories for pregnant adolescents as well as for adults is based on three factors.

- There are no established BMI cut-offs to define weight categories (with corresponding recommendations for prenatal weight gain) specific to adolescents.
- There is no research to support using the CDC issued BMI-for-age chart to define prepregnancy BMI weight categories for adolescents.
- It is consistent with the recommendations of the Expert Work Group on Maternal Weight.

It is recognized that both the IOM and the NHLBI BMI cut-offs for defining weight categories will classify some adolescents differently than the CDC BMI-for-age charts. For the purpose of WIC eligibility determination, the IOM and the NHLBI BMI cut-offs will be used for all women regardless of age. However, due to the lack of research on relevant BMI cut-offs for pregnant and postpartum adolescents, professionals should use all of the tools available to them to assess these applicants' anthropometric status and tailor nutrition counseling accordingly.

For twin gestations, the recommended range of maternal weight gain is 35-45 pounds with a gain of 1.5 pounds per week during the second and third trimesters. Underweight women should gain at the higher end of the range and overweight women should gain at the lower end of the range. Four to six pounds should be gained in the first trimester. In triplet pregnancies the overall gain should be around 50 pounds with a steady rate of gain of approximately 1.5 pounds per week through out the pregnancy.

For WIC eligibility determinations, multifetal pregnancies are considered a nutrition risk for WIC in and of themselves (Risk #335), aside from the weight gain issue. Education by the WIC nutritionist or paraprofessional should address a steady rate of gain that is higher than that of the singleton pregnancy.

Clarifications/ Guidelines

The Texas WIC Program recommends the use of option 2. "Low weight gain at any point in pregnancy using the Institute of Medicine-based weight gain grid – Range of Prenatal Weight Gain (WIC-4), when assigning this risk code. If a pregnant woman plots at any point beneath the bottom line of the appropriate weight gain range for her respective prepregnancy weight category, this is considered "low maternal weight gain."

Although this definition specifies "weight gain," if the pregnant woman has lost weight and her weight plots below the recommended weight gain range, or she has not gained the recommended pounds per month during the 2nd or 3rd trimesters, it is appropriate to assign this risk code.

The Centers for Disease Control and Prevention (CDC) defines a trimester as a term of three months in the prenatal gestation period with the specific trimesters defined as follows in weeks:

First Trimester: 0 through 13 weeks
Second Trimester: 14 through 26 weeks
Third Trimester: 27 through 40 weeks

Further, CDC begins the calculation of weeks starting with the first day of the last menstrual period. If that date is not available, CDC estimates that date from the estimated date of confinement (EDC). This definition is used in interpreting CDC's Prenatal Nutrition Surveillance System data, comprised primarily of data on pregnant women participating in the WIC Program.

A low rate of weight gain for a singleton pregnancy in the 2nd and 3rd trimesters will be defined as weight gain of less than 4 pounds /month beginning the 16th - 40th weeks of pregnancy. The higher weight gain limits of a singleton pregnancy will be used to determine appropriate minimum weight gain for multifetal pregnancies. Obese women will be plotted on the overweight prenatal weight gain grid and expected to have a weight gain that follows the lower limits of the overweight range.

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High Maternal Weight Gain

Definition/ cut-off value

Singleton Pregnancies:

Pregnant Women (current pregnancy), all trimesters, all weight groups: ≥7lbs/mo (Actual value is 6.6 lbs/mo (3 kg.) rounded to 7 lbs for ease of use.)

Breastfeeding or Non-Breastfeeding Women (most recent pregnancy only): total gestational weight gain exceeding the upper limit of the IOM's recommended range based on Body Mass Index (BMI), as follows:

Prepregnancy Weight Groups	Definition	Cut-off Value
Underweight	BMI <19.8	>40 lbs
Normal Weight	BMI 19.8 to 26.0	>35 lbs
Overweight	BMI 26.1 to 29.0	>25 lbs
Obese	BMI ≥ 29.1	>15 lbs

Multifetal Pregnancies: there are no nationally recognized recommendations for upper limit for multifetal gestations at this time. Until further deliberation and definition by RISC is provided, States should use whatever they are currently using.

Note: Until research supports the use of different BMI cut-offs to determine weight categories for adolescent pregnancies, the same BMI cut-offs will be used for all women, regardless of age, when determining WIC eligibility. (See Justification for a more detailed explanation.)

Participant category and priority level

Category	Priority
Pregnant	I
Breastfeeding Women	I
Non-Breastfeeding Women	VI

Justification

Women with large gestational weight gains are at increased risk for delivering high birth weight infants, which can secondarily lead to complications such as: dysfunctional and prolonged labor, midforceps delivery, cesarean delivery, shoulder dystocia, meconium aspiration, clavicular fracture, brachia plexus injury, and asphyxia. Neonatal mortality begins to rise when birth weight is >

Justification (cont)

4250g. (> 9 ½ lbs). Infants are at higher risk when birth weight is > 4000g. (> 9 lbs).

High gestational weight gains have been associated with pregnancy induced hypertension, preeclampsia and toxemia, although these associations need further study. One goal in the nutritional counseling provided to pregnant women by WIC is to achieve recommended weight gain by emphasizing food choices of high nutritional quality, particularly those foods high in folic acid and which are important in the prevention of neural tube defects.

Breastfeeding and Non-Breastfeeding women with extremely high weight gains during pregnancy may be at increased risk of subsequent obesity leading to other chronic health conditions. The WIC competent professional authority (CPA) is in an excellent position to remind participating women that limiting unnecessary calorie rich foods and participating in moderate and appropriate physical activity and exercise play a significant role in minimizing these risks.

The 1998 National, Heart, Lung and Blood Institute (NHLBI) Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, define weight classifications differently than the Institute of Medicine (IOM) in their 1990 report, Nutrition During Pregnancy. The IOM classifications were validated for pregnancy by Parker and Abrams and by Siega-Riz et al and others. Recommendations for weight gain during pregnancy therefore are based on the 1990 definitions of prepregnancy weight status. If future research shows that prenatal weight gain using the NHLBI definitions of adult weight status is safe for pregnancy and results in similar pregnancy outcomes, the definitions will be revised.

The IOM established prenatal weight gain recommendations based on prepregnancy BMI weight categories (i.e., low, normal, high, obese). As validated by Parker and Abrams, the IOM weight gain recommendations for each weight category are associated with healthy birth outcomes. The decision to use the IOM recommended BMI weight categories for pregnant adolescents as well as for adults is based on three factors.

- There are no established prepregnancy BMI cut-offs to define prepregnancy weight categories (with corresponding recommendations for prenatal weight gain) specific to adolescents.
- There is no research to support using the CDC issued BMI-for-age chart to define prepregnancy BMI weight categories for adolescents.
- It is consistent with the recommendations of the Expert Work Group on Maternal Weight.

It is recognized that both the IOM and the NHLBI BMI cut-offs for defining weight categories will classify some adolescents differently than the CDC BMI-for-age charts. For the purpose of WIC eligibility determination, the IOM and the NHLBI BMI cut-offs will be used for all women regardless of age. However, due to the lack of research on relevant BMI cut-offs for

Justification (cont)

pregnant and postpartum adolescents, professionals should use all of the tools available to them to assess these applicants' anthropometric status and tailor nutrition counseling accordingly.

An upper limit on weight gain for multifetal pregnancies (twins, triplets, etc.) has not been definitively established. For twin gestations, the recommended range of maternal weight gain is 35-45 pounds with a gain of 1.5 pounds/week during the second and third trimester. Underweight women should gain at the higher end of the range and overweight women should gain at the lower end of the range. Four to six pounds should be gained in the first trimester. In triplet pregnancies the overall gain should be around 50 pounds with a steady rate of gain of approximately 1.5 pounds per week through out the pregnancy.

For WIC eligibility determinations, multifetal pregnancies are considered a nutrition risk for WIC in and of themselves (Risk #335), aside from the weight gain issue. Education by the WIC nutritionist or paraprofessional should address a steady rate of gain that is higher than that of the singleton pregnancy.

Clarifications/ Guidelines

Pregnant Participants: Refers to all trimesters, all weight groups, and a weight gain of more than 7 pounds during any 30 day period. This weight gain should NOT be averaged, however, if it is obvious that the woman has gained more than 7 pounds in any 30-day period, document and assign the risk code. The participant needs to provide the weight gain information; verbal information is acceptable.

Breastfeeding or Non-Breastfeeding Participants: Weight gain refers only to TOTAL gestation weight gain during most recent pregnancy.

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